

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Original) A method for converting a nominal fuel quantity into a nominal torque for an internal combustion engine, comprising the steps of:

- prior to the conversion at the current operating point, determining the efficiency of the internal combustion engine as a ratio of actual torque and actual fuel quantity, and
- determining the nominal torque from the efficiency and the nominal fuel quantity.

2. (Original) The method according to Claim 1, wherein an extrapolation of the efficiency is used to determine the nominal torque.

3. (Original) The method according to Claim 1, wherein in order to determine the efficiency use is made of an efficiency curve which indicates the maximum ratio of torque and fuel quantity as a function of the fuel quantity.

4. (Currently Amended) The method according to Claim 3, wherein at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified, and wherein the nominal torque is determined by ~~means of~~ the modified efficiency curve.

5. (Original) The method according to Claim 4, wherein in the comparison the difference between calculated and indicated efficiency is formed and during the modification the efficiency curve is shifted by this difference.

6. (Original) The method according to Claim 1, wherein

- an extrapolation of the efficiency is used to determine the nominal torque,
- in order to determine the efficiency use is made of an efficiency curve which indicates the maximum ratio of torque and fuel quantity as a function of the fuel quantity,
- at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified,
- the nominal torque is determined by means of the modified efficiency curve,

wherein in order to determine the nominal torque the extrapolation is performed if a difference between actual fuel quantity and nominal fuel quantity lies below a specific threshold value, and

- otherwise the modified efficiency curve is generated and used in order to determine the nominal torque.

7. (Original) The method according to Claim 1, wherein

- an extrapolation of the efficiency is used to determine the nominal torque,
- in order to determine the efficiency use is made of an efficiency curve which indicates the maximum ratio of torque and fuel quantity as a function of the fuel quantity,
- at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified,
- in the comparison the difference between calculated and indicated efficiency is formed and during the modification the efficiency curve is shifted by this difference,
- the nominal torque is determined by means of the modified efficiency curve,
- in order to determine the nominal torque the extrapolation is performed if a difference between actual fuel quantity and nominal fuel quantity lies below a specific threshold value, and
- otherwise the modified efficiency curve is generated and used in order to determine the nominal torque.

8. (Original) The method according to Claim 1, wherein the nominal fuel quantity is an operating point-dependent maximum fuel quantity determined by a predefined smoke behavior of the internal combustion engine.

9. (NEW) A method for converting a nominal fuel quantity into a nominal torque for an internal combustion engine, comprising the steps of:

- prior to the conversion at the current operating point, determining the efficiency of the internal combustion engine as a ratio of actual torque and actual fuel quantity by using an efficiency curve which indicates the maximum ratio of torque and fuel quantity as a function of the fuel quantity, and
- determining the nominal torque from the efficiency and the nominal fuel quantity.

10. (NEW) The method according to Claim 9, wherein an extrapolation of the efficiency is used to determine the nominal torque.

11. (NEW) The method according to Claim 9, wherein at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified, and wherein the nominal torque is determined by the modified efficiency curve.

12. (NEW) The method according to Claim 11, wherein in the comparison the difference between calculated and indicated efficiency is formed and during the modification the efficiency curve is shifted by this difference.

13. (NEW) The method according to Claim 9, wherein

- an extrapolation of the efficiency is used to determine the nominal torque,
- at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified,
- the nominal torque is determined by means of the modified efficiency curve, wherein in order to determine the nominal torque the extrapolation is performed if a difference between actual fuel quantity and nominal fuel quantity lies below a specific threshold value, and
- otherwise the modified efficiency curve is generated and used in order to determine the nominal torque.

14. (NEW) The method according to Claim 9, wherein

- an extrapolation of the efficiency is used to determine the nominal torque,
- at the current operating point the ratio of actual torque and actual fuel quantity is calculated and compared with the efficiency indicated by the efficiency curve and, depending on the result of this comparison, the efficiency curve is modified,
- in the comparison the difference between calculated and indicated efficiency is formed and during the modification the efficiency curve is shifted by this difference,
- the nominal torque is determined by means of the modified efficiency curve,
- in order to determine the nominal torque the extrapolation is performed if a difference between actual fuel quantity and nominal fuel quantity lies below a specific threshold value, and
- otherwise the modified efficiency curve is generated and used in order to determine the nominal torque.

15. (NEW) The method according to Claim 9, wherein the nominal fuel quantity is an operating point-dependent maximum fuel quantity determined by a predefined smoke behavior of the internal combustion engine.